ERS Spectrum, Spring 2009 Vol. 27, No. 2, pp. 1-10 ©2009 Educational Research Service

# School Size: Why "Smaller" May Not Be the Answer

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School districts, and even states, striving to identify optimal school size are confounded more often than not by the conflicting research findings and theoretical arguments presented throughout the literature. Some writers adamantly declare that smaller schools are a "must" if educational opportunity is to be optimized. Others argue that school size itself has little impact on student performance, suggesting that other variables "masked" in school size are the real factors affecting student success. Yet others imply that smaller schools may make a difference in student performance, but the excessive cost to move in that direction is not warranted. They postulate that similar, if not better, results may be produced at less expense through enhanced technology, better instructional materials, and further professionalizing the teaching corps. Finally, some researchers studying school size indicate that, if school size does affect learning, its influence may vary greatly, depending upon the clientele served.

The truth is, however, that the real effects of school size, if any, are not yet fully known—and may never be. While the topic has been studied extensively, the findings have been mixed, and often contradictory. Part of the reason for such varied results rests with differences in research methodologies. However, there are also some other common sense explanations as to why school size research findings diverge, sometimes significantly. This article is an inventory of factors that affect school size research findings, along with suggested implications for districts and states making decisions about how many students their schools should house.

## School Outcomes Are Greatly Affected by Factors Outside the Direct Control of Educational Institutions

While the quality of the educational process in a school makes a difference in how children learn and who they become, some of the most significant contributors to a student's success rest elsewhere. For example, in a series of studies on the relationship of school size to student outcomes in South Carolina, a majority of the variability in student performance from school to school on state achievement tests was associated with the level of poverty of the children served (Carpenter, 2006; Durbin, 2001; Kaczor, 2006; McCathern, 2004; Roberts, 2002). Across these studies, the findings repeatedly indicated that the higher the poverty index of a school (proportion of children qualifying for free or reduced lunch or qualifying for Medicaid), the fewer the percentage of pupils scoring proficient or advanced on the Palmetto Achievement Challenge Test (PACT).

Findings that family socioeconomic and demographic factors are major contributors to how students perform in school are not limited to one state, nor are they a new concept. An earlier Rand study (Grissmer, Kirby, Berends, & Williamson, 1994) using national databases concluded the following:

> The most significant family characteristics associated with test scores are parental education levels, family income, family size, and age of mother at child's birth. Other things equal, higher levels of parental education and family income are associated with significantly higher test scores. (p. 105)

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The study further indicated that as family environments are enhanced, students can be expected to perform at a higher level academically. The report states that in the United States over time:

> two highly significant—but often overlooked—changes in family characteristics have had positive effects on test scores: the very large increase in parental education levels and the significant reduction in family size. (Grissmer et al., 1994, p. 106)

Nor are the effects of variables outside school control limited to this country. A 2006 study of the relationships between nonschool factors and student academic performance across 20 countries found that, regardless of country, parent education and job type correlated to students' performance (Hampden-Thompson & Johnston, 2006). The study points out that: (a) "on average, in all 20 countries, 15-year-old students with at least one postsecondary-educated parent performed better than students whose parents were educated to the secondary level or below" (p. 4) and (b) "having parents of high occupational status is associated with higher student mathematics literacy performance on average in all 20 countries included in the study" (p. 4).

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Thus, statewide, national, and international research studies have continued to indicate that factors outside the control of schools are associated with some of the most significant differences in how children achieve while in educational institutions. It is not surprising, therefore, that researchers probing for the impact of school-based variables on learning have produced mixed results. For studies that have not found significant relationships between school size and student achievement, at least part of the reason may rest with the fact that nonschool variables are so pervasive and intense that they overwhelm the smaller effects of school-related variables such as school size. Similarly, in those studies that have found significant relationships between the size of schools and student academic success, if the impact of nonschool variables like the poverty level of children served or educational level of parents have not been carefully controlled, the results may be deceptive. What appears to be a relationship between school size and student achievement may in fact be a situation where the effects of poverty have been "masked."

***Lessons for Educational Decision Makers***

The lesson here is that existing research can inform decision making regarding school size, but the factors affecting the learning process are so broad and complex that the relatively simple design of most studies cannot provide the final answer. Of particular importance is to realize that schooling does not operate in a vacuum defined by bricks and mortar. External factors do affect student performance, and must be considered in analyzing the potential impact of larger or smaller schools. Further, policy makers seeking to improve student achievement must look beyond the formal place called school. Instead of using limited resources to make schools smaller, the wise decision may be one that channels resources into appropriate pre-school experiences, and/or even prenatal care initiatives. Evidence indicates that, unless the bonds of poverty are broken before formal schooling ever commences, children of poverty will struggle with, and often be unsuccessful in, the educational process.

## Educationally Related Factors Other Than School Size Are More Central to Differences in Student Success

Few practitioners or researchers will argue that school size is the most important variable in what makes one school more successful than another. In fact, studies have indicated that factors related more directly to the classroom have some of the strongest relationships with level of student success. Clark (2002), after a study involving four distinct samples, concluded that:

> The achievement gap between students from different races and social classes largely may be most directly associated with variations in the time-use habits of students…and with the involvement of parents, teachers, and adult mentors in students' activities. (p. 12)

In a separate work, Linda Darling-Hammond (2003), after years of studying what makes some schools more productive than others, concludes that teacher expertise is the primary determinant of student academic success. She states:

> teachers with a combination of attributes—knowing how to instruct, motivate, manage and assess diverse students, strong verbal ability, sound subject matter, and knowledge of effective methods for teaching that subject matter—hold the greatest promise for producing student learning. (p. 11)

In effect, the literature on student achievement regularly has supported the idea that the classroom and the teacher within, more so than the school as a whole, are the